(c) An aggregate capacity of 1461 MW has so far been set up in the country from 438 small hydro power projects.

Power shortage in the country

*353. SHRI SURESH PACHOURI: Will the Minister of POWER be pleased to state:

(a) the power deficit in the country, State-wise, during last three years;

(b) the reasons for power shortage in the country;

(c) the additional power generation targeted and achieved during the Eighth and Ninth Five Year Plan; and

(d) the steps taken to solve the problem of the power deficit during the Tenth Five Year Plan?

THE MINISTER OF POWER (SHRI SURESH PRABHU): (a) State-wise power supply position in the country during 1999-2000, 2000-01 and 2001-02 is given in the Statement enclosed (*see* below)

(b) The main reasons for shortage of power in the country are:

(i) Growth in demand for power outpacing the growth in generation-low capacity addition during 9th Plan.

(ii) Non-availability of adequate inter-regional tie lines restricting export of power from surplus region to deficit region.

(iii) Inadequate strengthening of sub-transmission and distribution network due to inadequate funding by power utilities.

(iv) Shortage of peaking power in the grid.

(v) Low Plant Load Factor (PLF) of some of the thermal generating units.

(vi) Inadequate inflow into the hydro reservoirs affecting hydel generation.

(c) The capacity addition during Eighth Plan was 16423 MW as against the target of 30538 MW and the capacity addition during Ninth Plan was 19019 MW as against a target of 40245 MW.

(d) The following steps are being taken to improve the generation and availability of power in the country:

(i) A capacity addition of around 41,100 MW has been targeted for 10th Five Year Plan.

(ii) Early stabilization of newly commissioned units and overall increase in Plant Load Factor of thermal units.

(iii) Strengthening/Augmentation of Reduction in Transmission and Distribution losses. Funds are being provided for undertaking schemes for transmission and distribution systems to States under the accelerated Power Development & Reforms Programme.

(iv) Demand side management and Promoting energy efficiency and conservation measures.

(v) Disbursement of loans by the Power Finance Corporation for improving operation and maintenance of thermal power stations.

(vi) Enhancement of inter-state and inter-regional power transfer by strengthening of inter regional transmission links and finally leading to formation of the National grid.

(vii) Exploitation of hydro potential at a faster pace.

According to 16th Electric Power Survey brought out by the Central Electricity Authority, an additional capacity of about 1,07,000 MW is required to meet the demand of power by 2012 AD. For the 10th Five year Plan (2002-07), the target for capacity addition of around 41,000 MW has been planned. The experience of the poor performance in capacity addition during 9th Plan, was kept in view while fixing targets for the 10th Plan. During the 9th Plan, there was over dependence on

capacity addition by the Independent Power Producers (IPPs), which did not materialize as these projects could not attain financial closure on account of poor financial health of the State Electricity Boards (SEBs). Hence, for the 10th Plan, 22830 MW is expected from the central sector, approx. 11,150 MW from the State sector and around 7120 MW from the Private Sector. A National Conference was held on the 8th and 9th of July, 2002 at New Delhi to ascertain whether the targets were realistic and whether they could be attained. This conference was attended by the State Power Secretaries and Chairmen of SEBs and in their presence, each listed project was reviewed and critical constraints were identified. After detailed deliberations, it was agreed that this target of 41,000 MW was realistic considering the fact that about 19,000 MW is already under construction and another 8500 MW has the requisite approvals. An encouraging factor is that the outlay for the 10th Plan has been enhanced by 214% vis-a-vis the 9th Plan Outlay. This would ensure that adequate funds would be available for the capacity addition programme. One of the major reasons for poor capacity addition has been the inability of the SEBs/ utilities to raise required finances. A number of steps have been initiated to reforms and restructure the sector to make it financially viable.

The Government of India has signed Memorandum of Understanding (MOU)/Memorandum of Agreement (MOA) with twenty-two States. These reflect the joint commitment of the Centre and the States to undertake reforms in a time bound manner. The State Government's commitment in these MOUs include setting up of the State Electricity Regulatory Commission, 100% metering of 11 KV feeders, effective energy audit, identification and elimination of power theft and attainment of commercial viability in distribution. Government of India has committed its support through additional allocation of power from Central Generating Stations and financial assistance for strengthening of sub-transmission and distribution as well as for renovation and modernization of power plants.

Government have launched the Accelerated Power Development

and Reforms Programme (APDRP) to assist the States in improving their sub-transmission/distribution system in identified circles and to provide incentive grants linked to the bridging of the gap between cost of supply and average revenue per unit. Twelve State Electricity Regulatory Commissions have passed tariff orders, which reflect a trend towards tariff rationalization.

In addition, measures for Energy Conservation, Demand Side Management, Renovation and Modernisation, encouragement of captive power plants and reduction of transmission and distribution losses (including control and elimination of theft) are expected to further improve the availability of power. Besides, the proposed National Grid would eliminate the transmission hurdles, which are faced in transmitting electricity from surplus areas like Eastern Region. The Draft Electricity Bill, 2001 proposes to allow open access to consumers in a phased manner as may be allowed by regulatory Commission. The Regulatory Commissions may allow open access without eliminating cross subsidies by way of imposing a surcharge on transmission/wheeling on the consumers opting for open access.

In order to bring International investors, power majors and institutions face to face, Confederation of Indian Industries and Federation of Indian Chambers of Commerce & Industry in association with Ministry of Power, five International Conferences and Business Meets were organized. These were in the fields of transmission, energy management; distribution reforms; non-fossil fuel generation; fossil fuel generation and optimization of existing capacity.

The draft Electricity Bill, 2001 which is under consideration of Parliamentary Standing Committee on Energy, provides for stringent penalties against theft of power. States of Andhra Pradesh, Madhya Pradesh, Karnataka, Uttar Pradesh have enacted/promulgated stringent anti-theft legislation.

It is expected that with the effective implementation of reforms, commercial viability would be achieved and the confidence of investors in power sector will improve.

Statement

Regarding Power Shortage in the Country

Actual Power Supply Position

(All fig. In MU)

Region	1999-2000				2000-2001				2001-02			
State/ System	Reqt.	Avail.	Shortage Surplus/ Deficit(-)	%	Reqt.	Avail.	Shortage Surplus/ Deficit(-)	%	Reqt.	Avail.	Shortage Surplus/ Deficit(-)	%
1	2	3	4	5	6	7	8	9	10	11	12	13
Northern												
Chandigarh	1033	1032	-1	-0.1	1072	1068	-4	-0.4	1110	1108	-2	-0.2
Delhi	17635	17141	-494	-2.8	18575	17667	-908	-4.9	19350	18741	-609	-3.1
Haryana	15950	15578	-372	-2.3	17275	16793	-482	-2.8	18138	17839	-299	-1.6
H.P.	3125	3115	-10	-0.3	3190	3087	-103	-3.2	3293	3206	-87	-2.6
J & K	6065	4903	-1162	-19.2	6410	5361	-1049	-16.4	6635	5899	-736	-11.1
Punjab	26335	26164	-171	-0.6	27670	26923	-747	-2.7	28780	27577	-1203	-4.2
Rajasthan	25155	24024	-1131	-4.5	25080	24178	-902	-3.6	24745	24495	-250	-1.0
U.P.	44525	38800	-5725	-12.9	46295	39556	-6739	-14.6	48332	43545	-4787	-9.9
N.R.	139823	130743	-9080	-6.5	145567	134633	-10934	-7.5	150383	142410	-7973	-5.3
Western												
Chhattisgarh									8054	7825	-229	-2.8
Gujarat	51202	46994	-4208	-8.2	53038	47877	-5161	-9.7	53693	47530	-6163	-11.5
M.P.	37198	34543	-2655	-7.1	39644	34747	-4897	-12.4	31013	26233	-4780	-15.4
Maharashtra	73498	69002	-4496	-6.1	79527	71184	-8343	-10.5	80489	73438	-7051	-8.8
Goa	1806	1414	-392	-21.7	1766	1576	-190	-10.8	1767	1767	0	0.0
W.R.	163704	151953	-11751	-7.2	173975	155384	-18591	-10.7	175016	156793	-18223	-10.4

1	2	3	4	5	6	7	8	9	10	11	12	13
Southern												
A.P.	45835	42832	-3003	-6.6	47792	44055	-3737	-7.8	48394	44302	-4092	-8.5
Karnataka	28201	25851	-2350	-8.3	30242	27490	-2752	-9.1	32556	28493	-4063	-12.5
Kerala	12850	11908	-942	-7.3	13564	12670	-894	-6.6	13334	12349	-985	-7.4
Tamilnadu	38873	35797	-3076	-7.9	42702	39462	-3240	-7.6	46232	42951	-3281	-7.1
S.R.	125759	116388	-9371	-7.5	134300	123677	-10623	-7.9	140516	128095	-12421	-8.8
Eastern												
Bihar	8912	8348	-564	-6.3	9208	8563	-645	-7.0	9370	8992	-378	-4.0
D.V.C.	8464	8668	204	2.4	8368	8510	142	1.7	8319	8312	-7	-0.1
Orissa	10838	11143	305	2.8	11710	12070	360	3.1	12328	12318	-10	-0.1
W. Bengal	17951	18298	347	1.9	18787	18958	171	0.9	20670	20575	-95	-0.5
E.R.	46165	46457	292	0.6	48073	48100	27	0.1	50687	50197	-490	-1.0
N.E. Region												
Ar. Pradesh	119.8	120.7	0.9	0.8	127.7	130.1	2.4	1.9	136.3	134.6	-1.7	1.2
Assam	2868.3	2918.4	50.1	1.7	3092.9	3332.8	239.9	7.8	3450.5	3425.2	-25.3	-0.7
Manipur	470.5	451.2	-19.3	-4.1	463.9	453.4	-10.5	-2.3	456.5	440.6	-15.9	-3.5
Meghalaya	514.1	540.8	26.7	5.2	563.9	605.2	41.3	7.3	700.1	705	4.9	0.7
Mizoram	220.8	223.9	3.1	1.4	249.7	256.5	6.8	2.7	284.5	278.5	-6	-2.1
Nagaland	205.6	207.8	2.2	1.1	226	231.9	5.9	2.6	260.1	258.4	-1.7	-0.7
Tripura	579.9	590.1	10.2	1.8	574	596.4	22.4	3.9	647.1	612.6	-34.5	-5.3
N.E.R.	4979	5052.9	73.9	1.5	5298.1	5606.3	308.2	5.8	5935.1	5854.9	-80.2	-1.4
All India	480430	450594	-29836	-6.2	507216	467400	-39816	-7.8	522537	483350	-39187	-7.5

NOTE: U.P. includes Uttranchal, M.P. includes Chhattisgarh (1999-2000) & (2000-01) and Bihar includes Jharkhand.

Region	1999-2000				2000-2001				2001-02			
State/ System	Peak Dem.	Dem. Met.	Shortage Surplus/ Deficit(-)	%	Peak Dem.	Dem. Met	Shortage Surplus/ Deficit(-)	%	Peak Dem.	Dem. Met	Shortage Surplus/ Deficit(-)	%
1	2	3	4	5	6	7	8	9	10	11	12	13
NORTHERN												
Chandigarh	180	180	0	0.0	171	171	0	0.0	180	180	0	0.0
Delhi	2850	2498	-352	-12.4	3080	2670	-410	-13.3	3118	2879	-239	-7.7
Haryana	2527	2527	0	0.0	2800	2709	-91	-3.3	3000	2900	-100	-3.3
H.P.	618	618	0	0.0	585	585	0	0.0	562	562	0	0.0
J&K	1210	1004	-206	-17.0	1170	974	-196	-16.8	1209	999	-210	17.4
Punjab	5029	5029	0	0.0	5004	4904	-100	-2.0	5420	4936	-484	-8.9
Rajasthan	3672	3672	0	0.0	3755	3663	-92	-2.5	3700	3657	-43	-1.2
U.P.	6580	5058	-1522	-23.1	7200	6119	-1081	-15.0	7584	6887	-697	-9.2
N.R	20980	18882	-2098	-10.0	21740	19860	-1880	-8.6	23200	21346	-1854	-8.0
WESTERN												
Chhattisgarh									1357	1311	-46	-3.4
Gujarat	7554	5962	-1592	-21.1	7801	6905	-896	-11.5	8005	6700	-1305	-16.3
M.P.	6836	4808	-2028	-29.7	7111	5310	-1801	-25.3	5683	4457	-1226	-21.6
Maharashtra	12075	9747	-2328	-19.3	12535	10596	-1939	-15.5	12265	10726	-1539	-12.6
Goa	260	234	-26	-10.0	296	267	-29	-9.8	316	316	0	0.0
W.R.	24864	20333	-4531	-18.2	25614	20710	-4904	-19.1	26510	22024	-4486	-16.9
SOUTHERN												
A.P.	7209	6366	-843	-11.7	8000	6835	-1165	-14.6	8584	6873	-1711	-19.9
Karnataka	4591	3881	-710	-15.5	5037	4371	-666	-13.2	5338	4428	-910	-17.0
Kerala	2386	2169	-217	-9.1	2456	2331	-125	-5.1	2633	2189	-444	-16.9
Tamilnadu	6446	5640	-806	-12.5	7131	6038	-1093	-15.3	7158	6218	-940	-13.1
S.R.	20424	17832	-2592	-12.7	21929	18777	-3152	-14.4	22757	19201	-3556	-15.6

1	2	3	4	5	6	7	8	9	10	11	12	13
EASTERN												
Bihar	1430	1201	-229	-16.0	1470	1263	-207	-14.1	1409	1288	-121	-8.6
D.V.C.	1276	1276	0	0.0	1366	1390	24	1.8	1296	1209	-87	-6.7
Oriss	1909	1809	-100	-5.2	1952	1994	42	2.2	2132	1977	-155	-7.6
W. Bengal	3217	3010	-207	-6.4	3594	3426	-168	-4.7	3614	3414	-200	-5.5
E.R.	7370	7012	358	-4.9	7727	7490	-237	-3.1	7940	7648	-292	-3.7
N.E.R.												
Ar. Pradesh	48	45	-3	-6.3	49	49	0	0.0	50	50	0	0.0
Assam	565	556	-9	-1.6	584	579	-5	-0.9	688	618	-70	-10.2
Manipur	99	95	-4	-4.0	92	89	-3	-3.3	98	94	-4	-4.1
Meghalaya	124	126	2	1.6	129	129	0	0.0	165	160	-5	-3.0
Mizoram	64	64	0	0.0	74	72	-2	-2.7	75	73	-2	-2.7
Nagaland	49	48	-1	-2.0	52	52	0	0.0	61	58	-3	-4.9
Tripura	126	98	-28	-22.2	136	135	-1	-0.7	156	140	-16	-10.3
N.E.R.	959	932	-27	-2.8	1027	1043	16	1.6	1148	1043	-105	-9.1
All India	**72669**	**63691**	**-8976**	**-12.4**	**74872**	**65628**	**-9244**	**-12.3**	**78441**	**69189**	**-9252**	**-11.6**

Note: U.P. includes Uttranchal, M.P. includes Chhattisgarh (1999-2000) & (2000-01) and Bihar includes Jharkhand.